

# SAWISE and HERS-SA: Raising the profile of women in science

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**F**IFTY YEARS ON FROM THE 1956 WOMEN'S March on the Union buildings in Pretoria to protest against apartheid pass laws, several South African organizations have taken the opportunity to celebrate the achievements of women and to explore and debate concerns about the gender gap still evident in a range of academic indicators. Recent articles in the international literature suggest that this gap is a global phenomenon, evident throughout academia<sup>1</sup> and in the sciences in particular.<sup>2</sup> In South Africa, great strides have been made to narrow it, but a chasm remains in research productivity and leadership diversity.<sup>3,4</sup> It seems that women still have to work proportionally harder than men (in terms of publication) to achieve promotion<sup>5</sup> and they remain under-represented in the higher echelons of academia.<sup>6</sup> Many reasons for the gap have been postulated in the literature<sup>7-11</sup> and it is clear some of these reasons are more easily dealt with than others. Whatever the explanations for the disparity, women and those occupying leadership and decision-making positions need to deal more actively with the gender gap.

Two local academic women's-interests organizations, the South African Association of Women in Science and Engineering (SAWISE) (Box 1) and HERS-SA (Box 2), are taking the challenge seriously. Both provide important networking opportunities for women in academia. In a joint forum in Cape Town to commemorate National Women's Day on 7 August 2006, the question was asked: do assessment systems discriminate against women in science? International reports have been published suggesting a gender dimension to decisions about whose work gets published and who gets research grants and a place on decision-making committees.<sup>12,13</sup> The joint forum aimed to explore the question: does a gender bias exist in concepts of scientific excellence and the approach used to evaluate scien-

tific research in South Africa? Four speakers presented observations from their personal research, and open discussion followed.

Heidi Prozesky (University of Stellenbosch) reviewed her recent Ph.D. findings. Interviews with top-achieving academic women had revealed that this group in general did not feel that they had experienced discrimination.<sup>14</sup> An exploration of publication data of South African academics disclosed, however, that men and women in similar categories of productivity tended not to hold equivalent academic ranks. For example, just over half of the women in Prozesky's top productivity category held professorial ranks

while three-quarters of the males in the same category were associate or full professors. This trend held throughout productivity categories. Her conclusion was that something other than research productivity influences promotion, and that it is related to gender.<sup>5</sup>

Anita Maurtin-Cairncross (University of the Western Cape) provided some context for South Africa's gender gap, including socialized roles around family responsibilities and often greater teaching loads and committee duties for women than for men. Furthermore, the country cannot disregard its apartheid past and the challenges in dealing with the racial divide (white men and women still publish more than black men and women).

Wanjiku Muiruri-Mwagiru (representing HERS-SA) pointed out that academic women in South Africa have come a long way in the last 50 years. She made an impassioned plea for women to embrace their abilities and skills and use them with confidence to express their voices from their own unique perspectives.

## Box 1. SAWISE.

The aim of the Association of South African Women in Science and Engineering (SAWISE) is to strengthen the role of women in science and engineering in South Africa by, amongst other things:

- raising the profile of woman scientists and engineers
- highlighting and addressing problems faced specifically by women in these fields
- lobbying for the advancement of women in science and engineering
- providing leadership and role models for young people wishing to enter the fields of science and engineering.

## Who can become members of SAWISE?

Membership is open to all women who: are working, or have worked professionally in South Africa in the fields of science and engineering, or hold a suitable diploma, B.Sc. or B.Sc.(Eng) degree or higher degree in science or engineering, or are, or have been, school teachers of science, biology or mathematics in South Africa. Membership is also open to all men in the above categories who wish to associate themselves with the objectives of SAWISE.

For further information: <http://www.sawise.org.za>

## Box 2. HERS-SA.

### What is HERS-SA?

HERS-SA is a managed network to improve the status of women in higher education in South Africa. Its aims are:

- to develop and offer accessible professional development programmes for women working in higher education
- to empower women to take leadership positions in higher education institutions, thus providing much-needed leadership role models
- to challenge institutional culture and facilitate workplace change, thereby addressing gender inequity and enabling women to participate fully at all levels of the academic workforce.

HERS-SA is a registered Voluntary Association in South Africa, No. 027-577-NPO. It has received support and endorsement from the Cape Higher Education Consortium, Higher Education South Africa, the South African minister of education, the Andrew W. Mellon Foundation, and the Carnegie Corporation of New York.

### Why HERS-SA?

- Whereas 59% of the students obtaining a first degree at South African universities are women, only 37% of doctorates are awarded to women.
- Of the people working in higher education, 48% are women but less than 24% are at the senior management level.
- Of the academic staff at the level of lecturer and below, 50% are women but less than 10% of the full professors are women.
- Only 10% of the vice-chancellors in South Africa are women.

For further information: <http://www.hers-sa.org.za>

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The last speaker, Petra Engelbrecht (University of Stellenbosch), explored the subject of women and National Research Foundation (NRF) ratings. NRF ratings are a key indicator for promotion in the top-performing universities. Although still relatively low, the proportion of rated women has risen (from 18% in 2002 to 23% in 2005). Whereas the rating system was created in a male-dominated environment, there has been a genuine attempt to include women. The 'L' rating category, for example, provides an enabling platform for those who, for practical reasons, are late academic starters; the NRF post-graduate bursary awards for women and black people and the Thutuka programme also attempt to ensure parity.

A lively discussion involving the audience followed. It was recognized that women needed to be aware that the assessment playing field was not necessarily even, owing to factors both within and beyond their control. These included the differing career trajectories of women, often resulting from their family responsibilities; the difficulty in building international networks because of family and other restrictions on travel; and the fact that girls are often socialized to be less confident or assertive than men. It was recognized that a key step in achieving parity in academia would be to improve individuals' publication counts. The current NRF rating system gives critical importance to publication productivity and peer evaluation, and the question was, as women, what can we do to close the gap further? Several practical suggestions were made.

Women discouraged by rejection of manuscripts were urged to demand

substantiated reasons for the rejection, to enable them to address these points and to improve. They were encouraged to aim for appropriate journals and to be prepared to revise and/or re-submit when necessary. Women should purposefully choose to publish their research in ISI-accredited journals rather than conference proceedings and book chapters, as the former hold more weight in the evaluation process. Women academics should make every effort to create space for research and publication by taking up sabbatical opportunities, even if they are prevented by other responsibilities from going abroad. Women in the rarified atmosphere of top-level academia need to recognize their responsibility as role models and extend a helping hand to those who follow them. Above all, networking is essential, as it is ultimately contact with a wide national and international network of peers that assists in reducing latent biases in the evaluation process. Networks such as those provided by SAWISE and HERS-SA are unique vehicles for empowering women to become more effective researchers. The time has come for women to embrace their distinct qualities and to take control of their own research and academic paths.

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1. Hamel M.B., Ingelfinger J.R., Phimister E. and Solomon C.G. (2006). Women in academic medicine — progress and challenges. *N. Engl. J. Med.* 355, 310–312.
2. ETAN (2000). *Science Policies in the European Union*,

*Promoting excellence in science through mainstreaming gender equality*. ETAN Expert Working Group on Women in Science. Office for Official Publications of the European Communities, Luxembourg.

3. Chinsamy-Turan A. (2003). The status of women in science in South Africa. In *Proc. Pan African Workshop*, 1999, Nairobi, Kenya, pp. 18–23.
4. SARG (South African Reference Group on Women in Science and Technology) (2004). *Facing the Facts. Women's participation in Science, Engineering and Technology*. National Advisory Council on Innovation and Department of Science and Technology, Pretoria.
5. Prozesky H.E. (2005). Gender, journal publication productivity and rank attainment among South African academic authors. Paper presented at the South African Sociological Association Congress, University of Limpopo, June 2005.
6. Council on Higher Education (2004). *South African Higher Education in the First Decade of Democracy*. CHE, Pretoria.
7. Lawrence P.A. (2006). Men, women and ghosts in science. *PLoS Biology* 4(1), e19.
8. Barres B.A. (2006). Does gender matter? *Nature* 442, 133–136.
9. Handelman J., Cantor N., Carnes M., Denton D., Fine E., Grosz B., Hinshaw V., Marrett C., Rosser S., Shalala D., Sheridan J. (2005). More women in science. *Science* 309, 1190–1191.
10. Blackmore J. and Sachs J. (2000). Paradoxes of leadership and management in higher education in times of change: Some Australian reflections. *Int. J. Leaders. Educ.* 3, 1–16.
11. Acker S. and Feuerverger G. (1996). Doing good and feeling bad: the work of women university teachers. *Cambridge J. Educ.* 26, 401–423.
12. Wenneras C. and Wold A. (1997). Nepotism and sexism in peer review. *Nature* 387, 341–343.
13. Paludi M.A. and Bauer W.D. (1983). Goldberg revisited: what's in an author's name? *Sex Roles* 9, 287–390.
14. Prozesky H.E. (2006). A career-history analysis of gender differences in publication productivity among South African academics. Paper presented at the International Sociological Association Congress, Durban, July 2006.

#### More about the authors

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## Pharmacology congress for Cape Town

South Africa has been successful in its bid to host the 2014 World Congress of Pharmacology. The announcement was made at the 15th IUPHAR World Congress of Pharmacology, held in Beijing in July. The congress, to be known as WorldPharma2014, will be the first ever IUPHAR (International Union of Basic and Clinical Pharmacology) world congress to be held on the African continent, with health renaissance as the theme. The bid was awarded to the South African Pharmacology Society and won against competition from Japan, Brazil, Israel and Korea, with a majority vote after the second round of a three-round voting procedure.

The conference, to be held at the Cape Town International Convention Centre, is unusual in combining basic and clinical pharmacology in one (the precedent for this on such a scale will be the next congress in the series, to be held in Copenhagen, Denmark, in 2010).

#### Update on coelacanth research

The next issue of the *Journal* will feature articles on the African Coelacanth Ecosystem Programme, based on papers presented at a multidisciplinary conference at the end of 2003 and updated reports on significant developments since then. These papers include contributions from the geosciences and oceanography, the latest molecular studies, observations of coelacanth habitats by submersible and divers, conservation programmes in Indonesia and the western Indian Ocean, what we know about coelacanth distributions, and the latest scientific tools to investigate these iconic fish.



**Winning delegation:** Now in the front seats, two office-bearers of the South African Pharmacology Society [left, Douglas Oliver, president, North-West University, and, right, Tiaan Brink (secretary)] with Sue Duckles (president of IUPHAR, University of California, Irvine) in Beijing where the successful bid was announced.

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